

CANADA
DOMINION BUREAU OF STATISTICS

ANNUAL REPORT
OF THE
DOMINION STATISTICIAN
FOR THE
FISCAL YEAR ENDED MARCH 31
1922

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OTTAWA
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1923

LETTER OF TRANSMITTAL

*To General His Excellency the Right Honourable Lord Byng of Vimy, G.C.B.,
G.C.M.G., M.V.O., Governor General and Commander in Chief of the
Dominion of Canada.*

MAY IT PLEASE YOUR EXCELLENCY:

I have the honour to submit herewith, for the information of Your Excellency and the Parliament of Canada, the Annual Report of the Dominion Statistician, under Section 4 of the Statistics Act, 1918 (8-9 Geo. V, Chap. 43), for the year ended March 31, 1922.

I have the honour to be,

Your Excellency's most obedient servant,

JAMES A. ROBB,
Minister of Trade and Commerce.

DEPARTMENT OF TRADE AND COMMERCE,
OTTAWA, February 1, 1923.

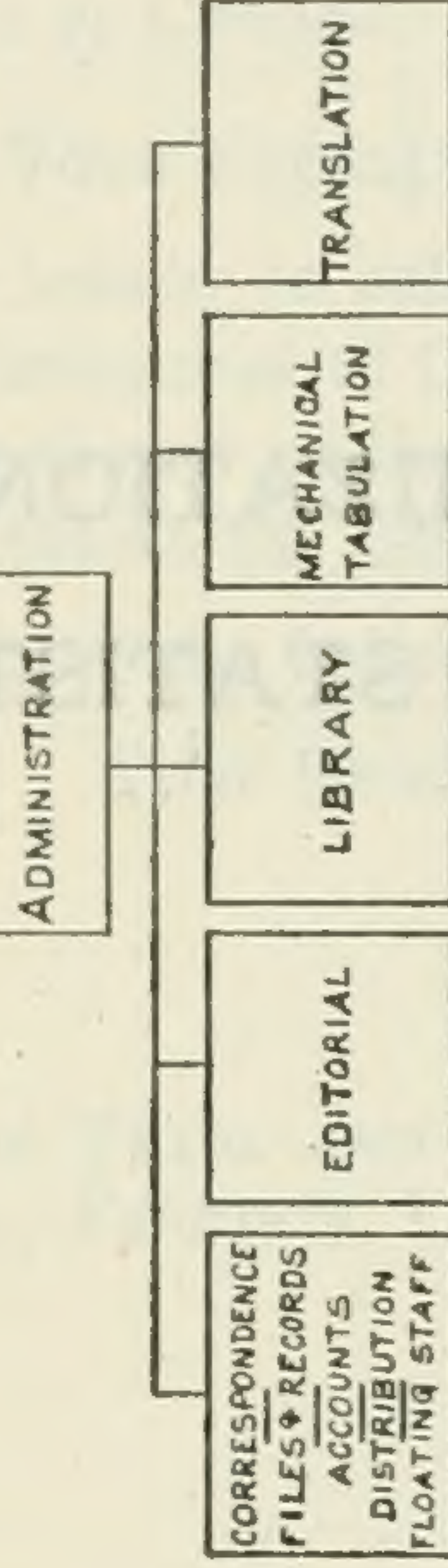


DIAGRAM SHOWING ORGANIZATION OF THE
DOMINION BUREAU OF STATISTICS,
CANADA

DOMINION BUREAU OF STATISTICS

(1919-1920)

DIVISION I ADMINISTRATION



DIVISION II. DEMOGRAPHY

DIVISION III. AGRICULTURE (Monthly and Annual Reports on Crops Live Stock &c.)

DIVISION IV. THE INDUSTRIAL CENSUS (Production, Raw Ma- terials, Capital, Labor &c.)

DIVISION V. FOREIGN TRADE (Monthly and Annual Reports on Imports and Exports)

DIVISION VI. TRANSPORTATION & COMMUNICATIONS

DIVISION VII. INTERNAL TRADE

DIVISION VIII. FINANCE

DIVISION IX. ADMINISTRATION OF JUSTICE

DIVISION X. EDUCATION

DIVISION XI. GENERAL STATISTICS

Fisheries

Furs

Forestry
and Allied
Industries

Mines
(38 subdivisions)

Central
Electric
Stations

Chemical
Industries

Dairy
Factories

General
Manufactures
(360 subdivisions)

Construction

Vital Statistics

Immigration
and
Emigration

THE
CENSUS

Railways

Tramways

Express
Companies

Water
Transport

Telegraphs

Telephones

General
Inter-areal
Movements

Special
Reports

Prices

Provincial

Municipal

Currency &
Banking

Insurance

Loan & Trust
Companies

Joint Stock
Companies

Civil
Justice

Criminal
Statistics

Wealth
Debt
Income

Canada
Year Book

"Barometries"

Water
Carriers

Navigation

Canals

Grain

Animals &
Animal
Products

Coal

Producers'

Wholesale &
Jobbers'

Import & Export
Valuations

Farmers'
Market prices

Retail

Prices of
Services

Stocks &
Bonds

REPORT
OF THE
DOMINION STATISTICIAN
FOR THE
FISCAL YEAR ENDED MARCH 31, 1922

OTTAWA, February 1, 1923.

The Honourable JAMES A. ROBB, M.P.,
Minister of Trade and Commerce,
Ottawa, Canada.

SIR;—Under section 4 of the "Act respecting the Dominion Bureau of Statistics", (8-9 George V, chapter 43), I have the honour to report as hereinafter for the fiscal year 1921-22.

The report is in two main parts. In the first a general review is given of the present organization of the Bureau and of the stage now reached in the development of statistical policy in Canada—with special reference to the line of future development. The second part contains an outline of the work carried out in the different branches of the Bureau during the period under review as reported by the chiefs in immediate charge.

**I. ORGANIZATION OF THE DOMINION BUREAU OF STATISTICS
—STAGE NOW REACHED IN THE DEVELOPMENT OF
STATISTICAL POLICY IN CANADA—THE LINE
OF FUTURE DEVELOPMENT**

The Dominion Bureau of Statistics was set up by statute in 1918 as a central statistical department for Canada (8-9 Geo. V., c. 43, "An Act respecting the Dominion Bureau of Statistics"). The Act was a consolidation of all previous statistical legislation (Census Act, General Statistics Act, Railway Statistics Act, etc.) with important additions.

The Act was based on the report of a Commission on Statistics of seven members, appointed in 1912, which after detailed investigation, criticized severely the omissions, inequalities, inaccuracies, overlapping and lack of coherence and common purpose in Canadian official statistics, and recommended (a) a series of specific reforms and enlargements, and (b) a policy of statistical co-ordination for the Dominion under central direction.*

* The report of the commission ran to seventy-two pages of descriptive comment and recommendations. Other public bodies had drawn equally pointed attention to the deficiencies of Canadian statistics. These statistics had previously consisted of reports brought out independently by different departments on subjects within their respective interests. The British North America Act had assigned "statistics" to the Dominion Government, implying that statistics are a national concern and that it is the duty of the Federal Government, while not precluding provincial statistics, to organize the field from a national standpoint. Previously to 1916 that duty had not been undertaken, though the creation of a permanent Census Office in 1905 was an important step forward. For a brief account of Dominion and provincial statistical activities from the earliest times up to 1912, see "First Annual Report of the Dominion Statistician, 1919," pp. 9-14, which sums up as follows: "A considerable but desultory body of statistics had grown into existence; in certain sections good work was being done—in others not good. There were many duplications, and at the same time numerous gaps at crucial points; finally there was a total lack of general plan. The embarrassment which this caused with the growth of the country and the increasing complexity of its problems will be appreciated."

In 1915, following this report, the office of Dominion Statistician was created, and the next two years were devoted to the drafting in detail of the various plans involved, which included a definitive monograph on each important field of statistics and covered the statistical work of all the departments. A memorandum entitled "A National System of Statistics for Canada" was printed for the Cabinet prior to the final adoption of these plans. Subsequently the Bureau was created in 1918.

Creation of the Bureau.

The Bureau has been constituted by the transfer of the following work and branches: (1) The Census and Statistics Office (covering the census of population and the statistics of agriculture, general manufactures and criminal justice); (2) Fisheries Statistics; (3) Mining Statistics; (4) Forestry Statistics; (5) Dairying and Fruit Statistics; (6) Water and Electric Power Statistics; (7) the Railways and Canals Statistical Branch (railways, express, telegraphs, telephones, canals); (8) External Trade Statistics (exports and imports); (9) Grain Trade Statistics; (10) Live Stock Statistics; and (11) Employment and Prices Statistics. In addition four new branches were erected, dealing respectively with Public Finance, Internal Trade, Vital Statistics and Education. Subsequently the statistical activities of the Fuel Controller and of the Board of Commerce were absorbed. Modifications of the Bankruptcy, Public Health and Railway Acts and of the regulation on franking privileges were also made.

Working Constitution of the Bureau.

The Act makes the Bureau responsible for the statistics "relative to the commercial, industrial, social, economic and general activities and conditions of the people"—a universal mandate. Certain statistics, however, originate as by-products in particular departments, or can best be collected through the field staffs or other machinery of such departments. These should not only meet the requirements of the departments in question, but should constitute an integral part of the general system. The Act accordingly assigns the Bureau the further task of "collaborating with all other departments of the Government in the compilation and publication of statistical records of administration." The machinery for this collaboration is provided by a regulation dated October 12, 1918, which gives the Dominion Statistician direct access to heads of department for conference purposes, with an instruction after such conference to prepare a recommendation for submission to Council, such recommendation on approval to constitute a permanent arrangement governing the particular subject dealt with. A further regulation provides for central machine compilation as an adjunct to the system. In this way the Bureau is constituted a comprehensive central statistical office, working for the most part under the Governor in Council, all purely statistical work having been brought by transfer under its immediate direction, whilst remaining departmental statistics are indirectly made part of the system. Delimitation is also achieved between the two classes of department which have legal inquisitorial powers, namely, executive departments having administrative functions in specific fields, and the statistical department which collects data for informative purposes only.

The linking up of provincial departments (which under the British North America Act, cover some most important statistical subjects) is secured through a clause permitting provincial officers to serve as agents under the Statistics Act. A further clause gives the Bureau right of access to all provincial, municipal or corporation records.

Purpose of Statistical Centralization.

The purpose of statistical centralization includes, of course, the numerous economies in overhead which concentration promotes, as in staff, equipment, elimination of duplication, etc. For example, two pronounced characteristics of statistical work are (a) the large proportion of routine, and (b) its ebb and flow; a "floating" staff is accordingly a feature of a central bureau. The use of electrical tabulating machinery, again, has revolutionized statistical work, but it effects an economy only on large-scale (i.e., centralized) operations. (The Bureau has an investment of over \$125,000 in machinery.) Central library, record and administration systems are further examples. Still another economy, from a different angle, flows from the concentration of statistical experience as a result of bringing the higher statistical officers of the Government into constant contact with each other. Finally the regulation above quoted provides a means for continuous unbiassed review of departmental statistical activities.

The convenience of the public is also promoted by the centralization of statistical inquiries. On the one hand the number of questionnaires is reduced by each being made to serve the purposes of several departments simultaneously, and on the other a general information agency is provided to which the public may apply for all resulting data on the production, trade, population, and other phases of progress in the country.

But the fundamental purpose of statistical centralization lies in the fact that its great subjects, such as production, trade, finance, population, etc., are not separate and distinct, but are closely inter-related. The State, in other words, is not a series of heterogeneous activities, but is itself an entity. The statistics of the country, therefore, must be framed to illustrate these relationships. If, however, the statistics of mines, fisheries, manufactures, and other phases of production are carried out in a series of water-tight compartments, the phenomena common to all, such as labour, capital, equipment, etc., will inevitably be handled differently, with non-comparable results. Again, if one system of classifying commodities is employed by the trade statistician, another by the production statistician, and another by the prices statistician, no general study of conditions surrounding a particular group of commodities can be made; similarly, the classification of occupations should be uniform, whether in the census analysis of population, in the vital statistical record of deaths, in criminal statistics, in labour statistics, and so on. Again, on points of method like the construction of index numbers—clearly such devices should yield results that are comparable from field to field. In brief, a true national statistic is not a mere aggregation of the statistics of different activities, but involves also a purview of the totality of phenomena with the object of revealing their interplay and, if possible, the controlling forces from time to time. Not only should the State be provided with statistics on all subjects of truly national interest (which will not be the case unless the duty of ensuring it is definitely undertaken), but these statistics should be properly "articulated" with each other, so as to form in so far as possible, a single conspectus.

Statistics is an art or method which must serve various interests and departments; but it must also be conceived and approached from the governmental standpoint as a science which has for subject the corporate progress of the nation.

Progress under the Bureau to Date

The Bureau has completed the plans for a unified, nation-wide statistical system, covering the most important phases of social and economic activity, and has carried them out to a considerable degree, though part is not yet realized. The First Annual Report of the Dominion Statistician contained a full description of the subject-matter of these plans and of the preliminary organization of the

Bureau. The chart appearing as frontispiece is from that report, and shows the eleven main branches under which the work is conducted; a list of the publications of the Bureau is also attached (see appendix) as further indicating the scope and character of the work.

In briefest form, the chief reorganizations effected to date are as follows:

(1) The Census (decennial and quinquennial) has been reorganized as a stocktaking of the people and of their basic industry, and its true place as such in the national statistical system and in relation to other fields of statistics determined; it has been considerably simplified as a result of the Bureau's widened control of allied statistics.

(2) A national scheme of vital statistics has been established by inducing the provinces (*a*) to enact uniform legislation drafted by the Bureau; (*b*) to adopt uniform administration of the same; (*c*) to use standard forms issued by the Bureau, and (*d*) to supply transcripts of the original returns.

(3) The monthly and annual statistics of agriculture have been brought under joint operation of the Bureau and the nine Provincial Governments, to the material improvement of these data and the elimination of much duplication of work and conflicting results. As re-organized, the work includes among other features an annual postal census of acreages under field crops and livestock on farms carried out through rural school teachers; also a complete pooling of data *re* crop conditions, etc., monthly between Dominion and provinces.

(4) The statistics of fisheries, mines, forestry, dairying, central power and general manufactures have been unified and placed on an annual basis (Industrial Census); in co-operation with the several Dominion and provincial departments concerned; altogether the statistical activities of over thirty departments have been brought into harmony. In conjunction with agricultural statistics, this provides comprehensive and up-to-date information on all phases of production—worked out, it may be added, in consultation with some thirty-five trade and industrial associations in different sections of the field. The statistics of industry were previously limited to those of certain Dominion and provincial departments, using widely different methods, covering only part of the field and without comprehensiveness of viewpoint.

(5) The statistics of foreign trade and of transportation and communications have been completely remodelled; in trade statistics a saving of \$25,000 a year has been effected, whilst the analytical and interpretative data have been increased and placed on a logical basis.

(6) A branch dealing with the more important aspects of internal trade, including interprovincial trade movements, the marketing of staple commodities (grain, livestock, fruits, etc.), and a complete system of prices statistics, has been established.

(7) Criminal statistics have been reorganized and co-ordinated with the Census and other social statistics.

(8) Substantial beginnings have been made in the treatment of public finance and of education—the latter in collaboration with the nine provincial governments, after an interprovincial conference held in Ottawa, 1920.

(9) Relations between the Bureau and the Department of Labour covering the entire range of labour statistics have been reduced to formal working arrangement and overlapping has been eliminated (1922).

(10) A library of the statistics of all countries has been established, and a central mechanical tabulating service available for all departments has been put in operation.

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The main achievement of the Bureau, however, has been in the organization of these several subjects in correlation in accordance with a general plan, and the consequent establishment of a comprehensive survey of the country as a single "going concern." In addition and as a result, there has been created what is frequently called a central "thinking office" in statistics, continuously in touch with general conditions and the line of probable developments.

Organization not yet completed

A statement of the fields in which statistical organization is incomplete is given below. On each of the subjects mentioned a plan of procedure has been drawn up in detail by the Bureau. It may be added that the general problem is essentially one of improved organization; in certain fields savings might be effected that would offset expansion in others.

(1) *Migration*.—The statistics of immigration and emigration are incomplete and out of correlation with the census and vital statistics, the remaining branches of population statistics, with which they should unite to form an entity.

(2) *Navigation*.—Certain improvements in this field are needed to round out the scheme of general transportation statistics and to complete the system of internal trade records above mentioned.

(3) *Imports and Exports*.—Improvement in the compilation of these statistics could probably be effected under section 23 of the Statistics Act.

(4) *Trading Operations*.—The Industrial Census should be made to throw light on general merchandizing operations. Interprovincial arrangements in certain sections should be completed—particularly in forestry and mining statistics.

(5) *Public Finance*.—There is need for further organization of the statistics of public finance, especially in the field of municipal statistics.

(6) *Income*.—The body of data which is being brought together on incomes of the people should be correlated with the data of the Bureau.

(7) *Private Finance*.—The statistics of loan and trust companies require remodelling, and the general scope of the Bureau's researches in connection with the wealth, capital imports, and general financial status of the country should be enlarged.

(8) No statistics of *Civil Justice* exist.

(9) *The Canada Year Book*.—Though the Canada Year Book has been steadily improved during the past five years, it still falls short of the success achieved by the Year Books of certain other countries. The Bureau is now in a position, at little extra cost, to place this publication (which circulates throughout the world as the official compendium of Government data on the resources and development of Canada, and for which the demand is rapidly growing), on a definitely higher level.

(10) *Monthly Review of Canadian Statistics*.—The General Statistics Branch (which issues the Year Book) is now in a position to issue a monthly review of Canadian statistics which would cost little and which, it is believed, would be of marked service to the business community. The object would be to bring together each month the latest "barometric" statistics, in a way that would reveal the current economic trend. Reviews of this kind are issued in

the United States, France, Australia, and other countries. Germany this year is beginning a new monthly review of "Economics and Statistics" that is probably the most ambitious attempt of the kind yet planned. A model has been worked out in the Bureau.

With the above additional organization, the Bureau it is believed would have a scheme of fundamental statistics adequate to the country's needs and capable of adjustment to conditions for a considerable time to come.

Administrative Machinery

The preceding section of this statement has dealt exclusively with problems of subject-matter. The Bureau is also in need of improvements in administrative machinery, for the purpose primarily of increasing its facilities for organization.

(1) More explicit definition of the Bureau, in the terms of its progress to date, as a central statistical organization, bearing the same relation as such to each and every department of the government, would simplify relationships, increase appreciation of its function and add to its forcefulness. Whilst *de facto* the Bureau has been given a free hand, it has suffered by being regarded as a movement by one Department to encroach on others, both Dominion and provincial. It is submitted, however, that it represents the one and only method of attacking a problem otherwise insoluble, and that its function must be regarded as nation-wide if the important object for which it exists is to achieve complete success.

It may be added that the Bureau has an exceptionally complex staff and organization. Its larger branches and subdivisions (most of which were previously major branches of departments) number 14, and it carries out altogether over 50 distinct pieces of work. Its staff this year totals 500; last year it reached 650, and it seldom falls below 300—the whole covering an exceedingly varied field and requiring correspondingly varied qualifications and organization.

(2) It is of interest to note that several countries have established advisory statistical councils as a feature of their statistical organization. European examples are afforded by Austria, Belgium, Holland, etc., and a committee of the kind has been recently set up in Great Britain. In the countries just mentioned the councils consist wholly of Government officials. Another model is that of South Africa whose Census and Statistics Act has the following clause:—

"There shall be a statistical council consisting of not less than four and not more than eight persons, who shall be appointed by the Governor General and shall hold office during pleasure; and it shall be the function of such council to advise in matters connected with this Act."

The South African Statistical Council consists of representatives of various public interests and has proved a valuable piece of machinery. The United States also has attached an outside advisory council to the Census Bureau, and other instances might be adduced, notably that of the new republic of Czecho-Slovakia, which, under its newly constituted central statistical department, holds an annual national "assembly" of over 60 delegates on statistics. The object is on the one hand to democratize statistics, to meet objections through misunderstanding of the Government's aim, and to increase the practicalness of the work. Good statistical work is peculiarly dependent upon public appreciation and support, yet the *raison d'être* for many individual phases and for co-ordinated organization is peculiarly liable to misconception. A Council aims also to increase the pressure for good organization brought to bear on outlying governmental machinery, and thus to mitigate the dead weight of indifference which

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sometimes obtains. The subject is a many-sided one, and materials for the full discussion of the form and function of such Councils are available in the Bureau.

(3) The providing of a permanent, properly planned and protected statistical building is advised.

Conclusion

The final concept in the organization of the Bureau is that of a national laboratory for social and economic research. Statistics are not merely a record of what has been, but are for use in planning what shall be; it is the duty of a statistical bureau to assist directly in the day-to-day problems of administration, as well as to provide their theoretic background. The action of several large universities in establishing research departments, and the endowment of the National Bureau of Economic Research in the United States are suggestive here. One of the most significant of recent developments in administration is the extent to which statistical organization has been increased as a guide to policy. The United States has recently made statistical organization the subject of a special report to Congress by the official Bureau of Efficiency (a report, it may be pointed out, that confirms in its recommendations the line of action taken in Canada). In Germany the Central Statistical Department has been for many years one of the most powerful engines of Government, its organization permeating the country, embracing several subsidiary state bureaus and some forty municipal offices. Italy reorganized statistics as a war measure; Spain has done the same during the present year; most European countries have centralized statistics. The progress already made in Canada has attracted favourable comment both inside and outside the country. Though the usefulness of the Bureau has only begun, in the past three years the applications to it for data by the public have more than trebled. From an organization standpoint the Bureau may be said already to have laid the foundations for a service which under constructive development will permit it to rank with that of any other country of similar institutions and conditions.

II. WORK OF THE BUREAU OF STATISTICS DURING 1921-22 REPORTS BY CHIEFS OF BRANCHES

The work of the Bureau during 1921-22 was as reported below by the chief officers in charge of the respective branches. No change in fundamental organization was made from the preceding year.

Population

The outstanding feature of the year in the work of the Bureau was the decennial census of population and agriculture, which fell to be taken as of date June 1, 1921, and which as now organized represents the general stock-taking of the nation and the background of practically all other branches of statistics. Mr. E. S. Macphail, Chief of the Branch on Demography in the Bureau, reports as follows:—

The Census

The planning of the census of 1921 in full detail was, of course, completed several months prior to the beginning of the fiscal year 1921-22. As elsewhere explained, its scope was considerably altered as compared with the previous census of 1911, largely as a result of the improved organization of subsidiary statistical fields which has been effected by the Bureau during the past five years. In the main the decennial census is now limited to the function of a

stocktaking of the Canadian people and of their basic industry, namely, agriculture. This has permitted some important eliminations. The creation of a national system of vital statistics, for example, has enabled the mortuary census, which was a feature of previous decennial censuses, to be discontinued. Similarly the organization of the statistics of mines, fisheries, forestry and manufactures on an annual basis in co-operation with the Dominion and provincial administrative departments concerned, has resulted in a reduction of forms, the census collecting only lists of operating concerns throughout the country as a basis for the annual investigation. The opening volume of the final census report will contain copies of the various schedules that were used and explanatory matter as to the purpose of each.

The work of the year may be divided under two headings: field-work and compilation. The field-work was extended over the period April to August inclusive, being at its "peak" in June. The Dominion for census purposes is divided into some 230 "districts" corresponding as nearly as possible with the number of constituencies in the Dominion House of Commons. These are in turn subdivided into "subdistricts" or enumeration areas, roughly corresponding with polling divisions. Remote and unorganized districts are covered by special machinery. Each district is under the supervision of a "commissioner" who has charge of enumerators, the latter numbering altogether 11,425.

During the month of May a pamphlet entitled "The Coming Census—Why it is taken—How it is taken" was issued by the Bureau for republication in the press. The pamphlet contained a complete description of the origin, purpose and methods of the census in popular form and was designed to secure the co-operation of the public with the enumerators, a factor so essential to the success of an undertaking of this nature. The moving-picture service of the Department of Trade and Commerce was also effectively employed to the same end.

The commissioners were for the most part appointed and instructed in April and the enumerators in May. April and May were also devoted to the distribution of supplies, of which 720 large boxes containing some 12,000 parcels were sent forward. Notwithstanding the increased volume of the returns resulting from the growth in population, the schedules were received back in somewhat less time than were those of the census of 1911.

The work of revising and correcting the schedules was begun in June, the staff being taken on gradually as the return of the schedules necessitated. Altogether over 24,000 letters were written in connection with the revision of the population schedules, whilst about 150,000 individual farmers were communicated with in the checking of the agricultural returns.

Immediately following the revision and audit of the returns, the coding of the information and its transfer to punch cards was begun. A new code of occupations was prepared. By September some 350 temporary clerks were engaged on this work, and reductions were not begun until the close of the year.

An innovation in the publication of results was adopted, whereby the figures for the various cities, towns, constituencies and provinces were given out to the press subject to revision, as the progress of the work permitted. This not only satisfied local interest in the census, but it assisted in the process of final checking. As the work for each province was finally completed printed bulletins were prepared and given wide distribution. These bulletins were followed by one on the Dominion as a whole, which will in turn be followed by bulletins giving special analyses of the population, as by racial origin, birthplaces, religions, etc., and giving the agricultural returns for each province.

Vital Statistics

The year 1921-22 saw the application of the plan for national vital statistics, first drawn up in 1918, and tentatively put in operation in 1920. The returns for 1920, though not considered final, were compiled and issued in mimeographed form (except for Quebec); summary statements of births, deaths and marriages by provinces were also given to the press at the close of each month as collected. With the progress now achieved it will be possible to issue during the coming year the first general report on Canadian Vital Statistics and to continue the same from year to year thereafter.

Agricultural Statistics Branch

Mr. E. H. Godfrey, in charge of the branch on agricultural statistics, reports as follows:—

Monthly Crop Reports.—The monthly crop reporting service, originated in 1908, has been continued on the same lines as in recent previous years. The subjects of inquiry have comprised stocks of farm products on hand, and the proportions merchantable; fall sown areas winter killed; the progress of spring seeding; preliminary (May 31) and revised (June 30) estimates of the areas sown to field crops; reports on the condition of crops during growth (April 30 to September 30); preliminary, revised, and final estimates of crop yields; records of agricultural values, including land, wages and farm live stock. Monthly observations as to the influence of the weather upon the growth of spring wheat have been continued and published in co-operation with the Dominion Meteorological Service. In co-operation with the Markets Intelligence Division of the Seed Branch of the Department of Agriculture inquiries were conducted through crop correspondents as to the prices of grass and clover seeds; these inquiries have proved exceedingly valuable in connection with its efforts to secure a satisfactory basis of marketing for farmers who grow clover and grass seeds for sale. Special telegraphic crop reports, as in previous years, have been collected and published after the close of the three critical growing months of June, July and August. Arrangements have been made for the cabling of official reports of the Argentine wheat, corn and flaxseed crops, and these are published immediately on receipt. A similar arrangement of mutual character has been made with the Indian Department of Statistics at Calcutta for the Indian and Canadian wheat crops.

Reports to the International Institute of Agriculture.—From the establishment of the Institute in 1910, the Agricultural Branch of this Bureau (Census and Statistics Office prior to 1918) has reported monthly to the International Institute of Agriculture on the principal field crops of Canada, the reports being cabled from Ottawa by the Canadian Commissioner of the Institute.

Annual Agricultural Statistics.—Annual agricultural returns of field crops and farm live stock were collected in June under co-operative arrangements between the Dominion and Provincial Governments, which have been in force since 1918 for all the nine provinces and since 1917 for the four provinces of Quebec, Saskatchewan, Alberta, and British Columbia. As in previous years, the returns were collected on cardboard schedules from individual farmers through the rural school teachers and children, except in British Columbia, where the returns were obtained direct by mail. The compilation of the returns was effected during the summer with the aid of a special temporary staff, and the estimates based thereon, as finally settled in consultation with the Provincial Governments, were published in summary form on November 22

and in detail in the Monthly Bulletin of Agricultural Statistics for November, 1921.

Monthly Bulletin of Agricultural Statistics.—In addition to the monthly reports of the Bureau's own crop correspondents, the annual statistics of field crops and live stock, the visible supplies of grain, the prices of agricultural produce, and the monthly weather record, various reports and articles on agricultural subjects have been published in the Monthly Bulletin of Agricultural Statistics during the year ended March 31, 1922. The following is a selection of the titles of the more important: Crop Reports of Provincial Governments; Reports of the Dominion Experimental Farms and Stations; Crop Reports from Other Countries; International Institute of Agriculture; Effect of Winter on the Storage of Potatoes (April); Exports of Grain from Canada, 1915-1921 (May); Forecasting of Crops from the Weather, by E. H. Chapman, D.Sc., M.A., (June); Index Numbers of Agricultural Prices, 1909-20 (June, 1921, and March, 1922); Production of Sugar Beet and Beetroot Sugar (July); Production of Flax Fibre (July); Production of Dairy Factories, 1920 (July); Fruit Statistics of Canada, 1920 (August); Fur Farming Industry of Canada, 1920 (September); European Corn Borer Conference, by Arthur Gibson, Dominion Entomologist, Department of Agriculture, Ottawa (October); Egg Production in Canada, 1920 and 1921 (November); The World's Wheat, by Sir James Wilson, K.C.S.I., An-nieslea, Crief, Scotland (December); Preliminary Estimate of the Value of Canadian Field Crops, 1919-21 (December); Cultivation of Fall Wheat in Dry Seasons (December); Acreage under Pasture in Canada, 1918 to 1921 (December); British Imports of Butter and Cheese (December); Agricultural Settlement of Returned Soldiers (December); Quality of Grain Crops, 1912-1921 (January); Canadian Tobacco Crop, 1921 (January); Cost of Wheat Production in Alberta (February); Average Yields Per Acre of Field Crops, 1912-21 (March); Field Crops of Canada Compared as to Quantity and Value, 1920 and 1921 (March). Special articles have been contributed by the Chief of the Division on the following subjects: Collection of Annual Agricultural Statistics (April, May, November); Distribution of the Canadian Wheat and Oat Crops, 1919 and 1920 (April); Values of Field Crops of Canada, 1870 to 1920 (May); Average Grain Yields in Various Countries (June); World's Production of Cereals and Potatoes (December); Agricultural Revenue and Wealth of Canada (March).

Miscellaneous.—The list of crop correspondents has been revised, and many new correspondents have been appointed either in replacement of non-effectives or in obtaining more complete representation. This work is still in process. In addition to the ordinary routine correspondence, a large number of domestic and foreign inquiries by letter have been answered throughout the year.

Industrial Census, 1920

The industrial census, under sections 20 and 21 of the Act, includes the statistics of fisheries, mines, forestry, furs, water-power, and general manufactures. The organization of the field has been carried out by the Bureau in co-operation with the several Dominion and provincial departments which have jurisdiction in the various sections of the field, some thirty in number—the object being to eliminate duplication and to secure uniformity of method and the best agencies for statistical collection and compilation. It was decided to include the hand trades as well as general manufactures in the survey for 1920 in order to render the results comparable with previous decennial census records. The work in this connection was carried out in the following main divisions:—

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Fisheries, Fur Farms, Dairy Factories.

Under Miss F. A. Brown, the fisheries statistics of Canada were collected in collaboration with the fisheries departments of the Dominion and of the provinces of Ontario and Quebec, the statistics of fur farms and of the fur trade in general in collaboration with the different provincial game and fisheries departments, and the statistics of dairy factories in collaboration with the Dominion and provincial dairy commissioners and the Bureau of Statistics of Quebec. The reports followed the lines of previous years, but were issued more promptly and with various improvements in detail which permitted of a reduction in printing costs. This division now supervises the statistics of slaughtering and meat-packing establishments, leather, etc.; so that it embraces the entire field of manufactured animal products.

Mining, Metallurgical and Chemical Branch.

Mr. S. J. Cook, chief, reports as follows:

Progress was made in the work of every division of the branch during the twelve months ended March, 1922. The consolidation of mineral statistics; the preparation of special reports on chemicals and allied products; the publication of a revised edition of the Directory of Chemical Industries in Canada; the establishment of a division of iron and steel statistics; and the adoption of a new commodity classification throughout the branch were among the principal items of the year's work. The new classification was put into effect at the close of the year and statistics relating to the production of 1921 were collected under it. The change involved a considerable amount of work in the revision of filing systems and indexes.

A new feature, undertaken in view of the apparently depressed condition of the mining industry, was a special survey of mineral production during the first half of the year, the results of which were issued in August. The report was similar in character to the Preliminary Annual Reports of Mineral Production formerly issued by the Department of Mines, except that only slight reference was made to the non-metals, though complete statistics for coal were obtained. The report was well received as a distinct contribution to the mining literature of the year. It also assisted towards the preparation of the Preliminary Report for the calendar year, which was given out in December and which proved to be close to the final figures available a few months later. The customary Report on the Mineral Production of Canada during the calendar year was also prepared and presented at the meeting of the Canadian Institute of Mining and Metallurgy on March 1, 1922. In addition to these reports, four reports on coal production were published during the year.

Late in 1921 a plan of complete co-operation with the Mines Department of Ontario was perfected, and the reports of mineral production for that year were collected on a co-operative basis, the Bureau printing and distributing the forms and the Ontario Government collecting the returns and forwarding copies to the Bureau. The plan was highly successful, and the minor difficulties encountered will be overcome next year. The provinces of Quebec and British Columbia have been very helpful in their suggestions and in their willingness to supply information collected by them which might be of use to the Bureau. Complete co-operation obtains with the other provinces.

The Directory of Chemical Industries published by the Bureau of Statistics as of date January 1, 1919, met with a cordial reception, the entire edition of 3,000 copies being exhausted within a few weeks. In 1921 the Bureau had approximately 1,000 unfilled requests on hand, to meet which a second edition was prepared. The edition contained a large amount of new material in addition to revisions.

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Advantage was taken of the Seventh National Exposition of Chemical Industries, held in New York during the week of September 12-17, 1921, to place before the thousands of visitors to the exposition the salient facts relating to Canada's progress in industrial chemistry. An electrically-driven exhibit was installed which presented in graphic form by a series of flashlights the most outstanding facts of Canada's chemical and metallurgical industries.

The desirability of consolidating all the work done in the Bureau relating to the production of iron and steel and the fabrication of products from these metals was met during 1921 by the organization of a special division. The first task of the division was the consolidation of the collected reports relating to every phase of the industry. By the end of February, 1922, this had been completed, and preparations were going forward upon the Bureau's first complete report on the iron and steel industry. The report will contain in one cover the production of pig-iron, steel ingots and castings in detail, and the fabrication of iron and steel products of every kind.

Beginning with January, 1921, a monthly series of mimeographed bulletins giving the production of pig-iron, steel ingots and castings in all grades was inaugurated and met with the general approval of manufacturers. It was found possible to collect and compile the information with sufficient promptitude to issue the statement by the 15th of the following month.

General Manufactures.

Mr. J. C. Macpherson, chief of the branch on the statistics of general manufactures, reports:—

In co-operation with various manufacturers' associations and prominent manufacturers the forms used for collecting the statistics for 1921 were improved with a view to render them more in line with records, methods of accounting, etc. Special attention was given to the improvement of the reports for a number of industries amongst which may be cited the following: saw-mills and logging, rubber goods, clothing, woollen goods. A marked improvement was noted in the manner in which the reports were completed by the firms reporting. The proportion of reports received perfect increased by about 15 per cent. In addition the regrouping of industries to bring together closely related industries under the supervision of the same clerks materially improved the work. The press letters and reports that were issued were consequently of a much more comprehensive and detailed nature than in previous years.

The number of inquiries received from the public is constantly on the increase, and a large volume of information has been supplied during the year. For the most part the information requested is of a special nature and does not follow the lines of the ordinary compilations. In all but a few instances it has been possible to satisfy these inquiries.

By arrangement with the Forestry Branch of the Department of the Interior, special information was collected by the Bureau as to the quantity, kind and value of lumber used by wood-using industries. The inquiry is to cover a period of four years, the Dominion being divided as follows: (1) Ontario, (2) Quebec, (3) Eastern provinces, (4) Western provinces. Ontario and the Eastern provinces have now been covered, and preparations are under way for the province of Quebec. For Ontario alone some 10,000 reports were collected.

With a staff decreased by eleven clerks some 5,000 additional reports were collected, audited and compiled, and the additional work for the Forestry Division was carried on without extra help, in addition to the special work rendered necessary by elaboration of the schedules and by the inclusion of additional questions by request of manufacturers' associations, etc. Though such

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analysis as the cities and towns compilations, the classification of employees and the classification of plants by value of production, as well as the study of proportionate production as between small and large establishments could not be undertaken, the above record was rendered possible only by the increased efficiency and improved organization of the staff.

External Trade Branch (Statistics of Imports and Exports)

Mr. W. A. Warne, in charge of the branch on statistics of imports and exports, reports as follows:—

Revision of Trade Classification.—At a series of conferences between representatives of the Bureau of Statistics and the Department of Customs, the classifications used in collecting, analysing and issuing trade statistics were considerably enlarged and otherwise improved, while the systems of work in the Bureau and the department were brought into complete co-ordination and harmony. In connection with this revision a large number of leading manufacturing and commercial concerns throughout Canada had previously been consulted as to their views concerning additional items in the classifications which would be of special value to their businesses. As a result of these conferences, more than 300 new items have been added to the classifications during the last three years, the number being about equally divided between the import and export lists. The system of grouping, adopted in 1920, has also been improved; so that inquiries for statistics of various categories of commodities may be answered without delay and with the maximum of accuracy. Under present arrangements a conference between the Bureau and the Department of Customs is held annually for the thorough consideration of the changes in the classification suggested in the course of the year's work. At the conference in October, 1921, twenty additions were made to the imports and eight to the exports classification, chiefly in response to requests from various business interests.

Annual Trade Report.—The Annual Trade Report for the year introduced several new features in Canadian trade statistical presentation. The arrangement is now in three sections as follows: (1) Summary tables, including twenty-five statements of an introductory and summary character, giving (a) a general historical review of trade back to Confederation and (b) an analysis from various points of view of recent or current trends, generally over a five-year period. (2) Detailed tables, giving the current statistics for all items of the trade classifications, with numerous totals and recapitulations by groups and classes. These tables are two in number, the first containing detailed information respecting all commodities imported, with countries whence received, for a five-year period, the figures for the latest year being further extended to show the amount imported and the duty collected under the General, Preferential and Treaty tariffs, respectively. The second table contains details of all Canadian commodities exported, with country of destination, for a five-year period, also the exports of foreign commodities for the last two years only. In the presentation of these statistics the items are grouped on the principle of *Component Material*; i.e., under such headings as "Agricultural and vegetable products," "Animals and animal products," "Fibres, textiles and textile products," "Wood, wood products and paper," "Iron and its products," etc., making, in all, nine main groups. (3) To the above was added a section analysing the imports and exports by main groups and degree of manufacturing classified according to *origin* (e.g., "articles of agricultural or vegetable origin," "of animal origin," "of marine origin," "of forest origin," "of mineral

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origin," etc.) and also according to their various purposes (e.g., "food," "clothing," "producers' materials," etc.). Another important innovation was the "bilingualizing" of the report: the French text is now printed side by side with the English, thus obviating the necessity of printing two reports and gaining the advantage of issue in both languages simultaneously. The new format has been cordially received by financial, industrial and commercial interests. The Bureau is now issuing a more complete and concise annual trade report than was ever before published in Canada.

Monthly Trade Report.—This report was issued as heretofore, with certain amendments and added details designed to make it more useful to the public. The addition of hundreds of new items has increased the size of the publication. There has been a decided gain in respect to timeliness of issue during the year, the various numbers reaching the public, on an average, nineteen days earlier than in the previous year. The average elapsed time between the receipt of monthly data in the Bureau from the Department of Customs and the despatch of first copy to the printer was three and one-half days, compared with five days in the previous year.

Monthly Advance Trade Summary.—The branch has continued the issue of a Monthly Trade Bulletin, giving a general statistical summary of Canada's trade, in advance of the detailed report. There was an urgent demand for such preliminary information. This bulletin is issued on or about the 24th of each month.

Special Trade Statements.—A feature of the work has been the great increase in the number and circulation of special statements. Inquiries for such statements have been received in constantly increasing numbers, originating from almost every form of Canadian enterprise, including industrial, commercial, transportation, banking and other activities. The branch now prepares, as a regular feature of its month's work, some thirty different advance trade statements to meet urgent appeals from business interests. The number of these special compilations has doubled since last year as has also the number of addresses on the mailing list to receive them. Numerous other special statements were compiled during the year from British and foreign returns to meet the demand of Canadian exporters for information indicating the opportunities for extending Canadian trade abroad. Special statements were also compiled for the League of Nations, for the International Institute of Agriculture, and many others.

General.—On the whole, there has been a marked advance both in the quantity and the character of work performed by the branch. The lack of separate publications giving statistics of the trade of Canada with British and foreign countries, such as were published prior to 1917, has been responsible for a large increase of work in the compilation of special trade statements. In view of the urgent and increasing demand for such statistics it is suggested that a series of trade brochures be now issued on a conservative plan, showing the trade of Canada with (a) Africa; (b) Asia; (c) Central and North America; (d) Europe; (e) Oceania; (f) South America, and (g) West Indies.

Internal Trade Branch

Mr. F. J. Horning, in charge of statistics of internal trade, reports as follows:—

Grain Trade Statistics.—The report on the Grain Trade of Canada for the crop year ended August 31, 1920, was completed and published in due course.

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The matter of grain statistics has been thoroughly discussed with the Board of Grain Commissioners for Canada, with the result that several new features have been added, and the reports for both 1920 and 1921 made more complete than any issued for previous years. The annual statistics of the Canadian grain trade may now be regarded as a comprehensive treatment of the production and movement of grains within Canada towards international markets and in relation to the cereal resources of the world.

Weekly grain trade reports are also issued in mimeographed form showing Canadian grain in store by elevators and grades with comparative figures for previous years; receipts and shipments of grain at the different classes of elevators subdivided according to their location; United States grain in store, with receipts and shipments, at the public elevators in the east. Monthly reviews are included in this series summarizing the receipts and shipments of grain by months with comparative figures for the previous year; movement of United States grain at the St. Lawrence and Canadian Atlantic ports; inspections of grain in both the Eastern and Western Inspection Divisions; exports of grain by customs ports of exit, with summary showing shipping routes. A further monthly statement is also included showing quantities of grain ground and products produced therefrom at flour and other mills in Canada, with totals for the Eastern and Western Inspection Divisions. Other supplemental and special statements are included from time to time.

Live Stock and Animal Products Statistics.—The second annual report covering the marketing of live stock and animal products for the calendar year 1920 was prepared and issued during the past year, in collaboration with the Dominion Department of Agriculture, several tables being added in order to round out the material and render the statistics covering this industry as complete as possible. The report traces the movement of animals from the farm through live stock yards, for slaughter and the manufacture of meat products or for export; also the movement of live animals between province and province. The marketing of animal products is next dealt with and covered to show the various phases of production, visible supply and inter-provincial movement. A review of Canada's international trade in live stock and animal products in relation to world supply is added, together with a section on prices.

Coal Trade Statistics.—With the cessation of fuel control at the end of the fiscal year 1920-21, the collection and compilation of special data required for the use of the Board of Railway Commissioners for Canada in connection with the coal situation were discontinued. Monthly reports were continued from retail and wholesale dealers showing quantities of coal received, prices and stocks on hand at the end of each month.

Prices Statistics.—Records of the fluctuations of the wholesale prices of a selected list of commodities have been maintained in the Bureau since January, 1919. These prices, together with corresponding figures for the year 1913, are now being revised and tabulated, and index numbers are being calculated based on the average prices for 1913. When this material is completed it is proposed to publish same in the form of a special report, with annual supplements from time to time. Data will be compiled monthly and press letters issued covering same, so that current information on the subject of prices will be available. Retail prices of a selected list of commodities are also being compiled and tabulated in the Bureau, statements being sent each month to the Department of Labour and printed in the *Labour Gazette*. In addition to the retail prices of food commodities collected from retail dealers, a record of prices prevailing at farmers' markets throughout Canada has been maintained. The fluctuations of prices of stocks and bonds listed on the leading stock exchanges in Canada

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are also recorded weekly in the Bureau. These prices are being tabulated for the years 1913, 1919, 1920, and 1921 and index numbers calculated showing the average prices for the year 1913 as a base. Parallel statistics will therefore be available covering both security and commodity prices. Data are also collected relating to fluctuations in the rates of interest and will be included in reports on security prices.

Information relating to the various services paid for through gas, water and electric rates, hospital charges, etc., is also collected and compiled in the Bureau. These data together with material showing tax rates, collected with other municipal statistics of the Finance Branch of the Bureau, and freight, telephone rates, etc., collected by the Transportation Branch, afford valuable information regarding those factors of the cost of living not represented by commodity prices.

Visible Supply—Cold Storage, etc.—A record of the visible supplies of food commodities in cold storage is compiled in the Bureau monthly and published in mimeograph form. The visible supply of grain in store in the country, interior terminal, public terminal and private terminal elevators in the Western Inspection Division and public elevators in the east is compiled and published weekly as set out above. Data regarding stocks of coal on hand are also collected monthly in connection with the coal trade statistics. Statistics are also collected weekly showing stocks of raw and refined sugar in the hands of refiners, receipts and meltings of raw sugar, manufacture and shipments of refined sugar. These are compiled and issued in the form of monthly press letters with a summary statement at the end of the calendar year. A quarterly inventory is also compiled and published showing stocks of raw hides and skins in the hands of Canadian packers, tanners and dealers and others.

Interprovincial Trade.—The Transportation Branch of the Bureau collects monthly traffic reports from railway companies showing loadings and unloadings of freight by classes of commodities according to provinces. With similar reports from water transportation companies, statements yielding a fairly comprehensive view of bulk interprovincial trade movements, will, it is thought, be feasible. Up to the present, however, no comprehensive data on coastwise trade have been obtainable. The railway reports have been used by the Transportation Branch as an index of the volume of traffic only.

Transportation Branch

Mr. G. S. Wrong, chief, reports as follows:—

The annual report on railway statistics is now issued on a calendar year basis instead of for the year ending on June 30, and advantage has been taken of the change to introduce several improvements in method of presentation, the net result being a material reduction in the size of the report. Conferences with the leading railway companies were held prior to the introduction of these changes.

A feature of the past year was the inauguration of a monthly report on railway operating revenues and expenses. This not only provides up-to-date information on a subject on which public interest is largely centred, but it enables an advance summary of the year's operations to be given out several months prior to the date at which similar statistics were previously available.

The first monthly railway traffic report, planned in 1920, was issued in April, 1921. In addition to its direct interest it throws a considerable light on the interprovincial movement of commodities.

In canal statistics additional statements on the movement of Canadian oats, barley and flour were introduced. A monthly mimeographed report on canal traffic was begun.

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The usual statistical summaries of express, telegraph and telephone statistics were issued.

The staff of the branch was reduced by two during the year with the completion of extra work entailed by the reorganization of these statistics under Order in Council, P.C. 1754, August 29, 1919.

The transportation branch also collected and published the annual statistics of central power stations in Canada in co-operation with the Dominion Water Powers Branch, of the Department of the Interior.

Statistics of Finance

Lt.-Col. J. R. Munro, in charge of statistics of finance, reports as follows:--

Provincial Finance.—The co-ordination of provincial public revenues and expenditures which has been occupying the attention of the branch for some time has been completed for the five-year period 1916-1920, and the analysis is now ready for use in detail or for publication if it is thought advisable to issue a report. A summary will be published in the *Canada Year Book*. A classified statement of assets and liabilities of the provinces for 1919 and 1920 has also been carried out. National interest in matters pertaining to taxation and public finance has involved a growing demand upon the Bureau for statements which will show comparative conditions not only by years but by geographic distribution as well. As there is almost an entire lack of uniformity in methods of accounting as between the provinces the only method of obtaining comprehensive or accurate comparative statements is by an analysis of the nature just completed.

Municipal Finance.—The second report of a series dealing with municipal finance, showing statistics of towns in Canada having a population of from three to ten thousand, was compiled and printed during the year, while a third report giving similar data for towns having a population of one to three thousand is now ready for press. These reports are supplemental to the first report of the Bureau on municipal finance, which covered the cities of Canada of 10,000 and over. The demand for the last-mentioned report has been so large that a reprint was found necessary for 1920. The experience gained in the compilation of the first report led to slight alterations in the schedule of accounts which met with the general approval of civic officials. The Bureau's series of studies on the financial activities of urban centres of Canada having a population of one thousand and upward is not complete. Until some uniform scheme of reporting financial statistics is adopted and put into operation by municipalities and provincial governments throughout Canada, the present treatment of the subject by the Bureau would appear to be all that is feasible, though a file of individual municipal returns as issued is maintained.

Judicial Statistics Branch

The annual report on Criminal Statistics, prepared under the supervision of Mr. R. E. Watts, followed much the same lines as the two previous reports. The main body of the report consists of seventeen tables covering indictable and non-indictable offences by judicial districts and compiled according to the nature of offences, birthplace, occupations, religions, civil condition and education; summary convictions, juvenile offences, pardons and commutations, retrospective tables--1876 to date--respecting classified groups of offences with ratios, etc. To these are added statistics relating to penitentiaries and other penal institutions, 140 in number, police activities in urban municipalities of 4,000 and

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over, court proceedings, pardons and commutations, etc. A special compilation of offences under the Opium and Narcotic Drug Act was added in view of the current interest in this class of crime. The collection of these statistics involved the distribution of 6,000 schedules and circulars of instructions to 500 court officials in 163 judicial districts.

Special attention was given during the year to the improvement of statistics relating to juvenile delinquency. A tentative form was issued as a basis of discussion with judges of juvenile courts, members of social service councils, probation officers, etc., the general object being to differentiate juvenile offenders and secure certain details as to home conditions, etc., which are considered of importance as bearing on the treatment of this class of offenders. A scheme for the collection of statistics relating to civil justice was drawn up as a basis for discussion should it appear desirable at any time to institute a statistical service of this character.

Education Statistics Branch

Prof. S. A. Cudmore, Chief, reports as follows:—

During the year ending March 31, 1922, the Education Statistics Branch of the Bureau prepared and published the first comprehensive Dominion-wide survey of education issued in Canada viz., an "Historical Statistical Survey of Education in Canada". This publication, the preparation of which entailed very considerable research in a hitherto undeveloped field of statistical work, was favourably received by the educational world both within and outside of Canada, as an attempt for the first time to deal comprehensively with Canadian education. The work was carried out under the immediate direction of Mr. M. C. Maclean, M.A.

Under the agreement reached at the Dominion-Provincial Conference on education statistics of 1920 the annual statistics of the provinces of Manitoba and Saskatchewan were compiled by the Education Statistics Branch, the results being placed at the joint disposal of the Departments of Education concerned and of the Bureau. The education statistics for Alberta were also compiled on the same plan, so that comparable statistics of education are now available for the three Prairie Provinces. In order to secure comparable results, Saskatchewan and Alberta have changed their statistical year for education statistics from the calendar year to the natural school year ending June 30, as recommended by the Dominion-Provincial Conference. The Department of Education of New Brunswick has also requested the Branch to draft a form of return for that province, which should include the information recommended at the Conference on Education Statistics. This work was completed with the minimum of change in the provincial statistics. The Department of Education for Nova Scotia has also accepted the scheme and states that "the new form of registers and returns will come into use in every school in the next school year". Besides its activities carried on in co-operation with the provincial departments, the Education Statistics Branch has carried out considerable complementary work. For instance, it has secured education statistics from numerous private schools which were not included in provincial returns; from the business colleges of the country; from the twenty-two universities and the forty odd professional, technical and affiliated colleges; besides making a first attempt to secure comparable statistics for the public libraries throughout Canada. It has also answered numerous inquiries from educationists, both within and outside of Canada, who are learning to look upon the branch as an authoritative and impartial source of statistics relating to Canadian education. Several of these inquiries were extensive, and were made at the request of officials of provincial Departments of Education.

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General Statistics—The Canada Year Book, Etc.

Prof. S. A. Cudmore, editor of the Canada Year Book, and in charge of the branch on general statistics, reports as follows:

The chief single work of the General Statistics Branch is the preparation and publication of the Canada Year Book. This involves a revision of statistical tables covering practically the entire range of social and economic statistics and the careful preparation of a considerable amount of descriptive matter therefor. The leading article of the 1920 Year Book dealt with "Reconstruction in Canada" and was written by the editor. It extended to 64 pages and entailed very considerable research. Other features were careful summaries of the Dominion and provincial legislation of 1920, and of the principal events of that year.

After a careful study of the statistics of current economic trend ("barometric" statistics) published in different countries by official authorities (the Federal Reserve Bulletin and the Survey of Current Business in the United States; *Wirtschaft und Statistik* in Germany), and by unofficial bodies (Babson's, Bradstreet's and Brookmire's in the United States; the Economist, the Statist and the London Times in the United Kingdom), the Branch has prepared a Monthly Review of Current Canadian Statistics which is being kept up to date. In connection with this feature of its work, the branch collects the statistics of bankruptcies under the Bankruptcy Act.

The branch has furnished materials during the year in response to many official and unofficial enquiries for statistics of a general character relating to Canada and other countries both within and without the British Empire. Among these, a considerable body of statistical information was prepared for the Canadian representatives at the Genoa Conference. In order properly to discharge its duties in answering inquiries the branch is entrusted with the administration of the library of the Bureau, consisting of some 16,000 or 18,000 volumes on statistical and economic subjects including the official statistics of practically every government in the world. One of the most strenuous tasks of the branch during the year was the moving of this library from the Daly Building to its present quarters without serious interruption to the library service.

An important part of the work of the branch has been the preparation of the material relating to Canada published in such official British publications as the Statistical Abstract for the several British oversea dominions and protectorates, and the Colonial Office list; also for such unofficial but important and widely circulated statistical annuals as the Statesman's Year Book, Whitaker's Almanac, the London Stock Exchange Office Intelligence (British), the New York World Almanac and the Brooklyn Eagle Almanac (U.S.), Heaton's Annual, Five Thousand Facts About Canada, Bank Reports, etc. The branch also prepares each month the Canadian statistics included in the League of Nations monthly statement. Recently it revised the Canadian material published in the Home and School Reference Work published by the Home and School Education Society of Chicago. While there is a limit to such activities, it is unquestionable that much accurate information concerning Canada has been disseminated in this way throughout the world.

I have the honour to be, sir,

your obedient servant,

R. H. COATS.
Dominion Statistician.

APPENDIX

REPORTS, BULLETINS, PRESS RELEASES, ETC., ISSUED BY THE DOMINION BUREAU OF STATISTICS

ADMINISTRATION—

Annual Report of Dominion Statistician.

POPULATION—

(Continued)

Bulletins of the Sixth Census of Canada, 1921. (A bulletin on the Population and area of each Province by Electoral districts, Cities, Towns and Villages, with a summary of rural and urban population.)

The reports of the 1921 census will include three volumes on population and one on agriculture; there will also be issued a series of special reports on the Foreign-born, Origins of the People, Religions, Families, Housing, Literacy and School Attendance, Earnings of the People, Unemployment, etc., etc. A bulletin on the agriculture of each province will also be issued.

Reports of the Fifth Census of Canada, 1911: Vol. I. Areas and Population by Provinces, Districts and Subdistricts, with Introduction. Tables I to XV, pp. i-viii, 1-623. Vol. II. Religions, Origins, Birthplace, Citizenship, Literacy and Infirmities by Provinces, Districts and Subdistricts, with Introduction. Tables I-XLVI, pp. i-iv, 1-634. Vol. III. Manufactures for 1910 as enumerated in June, 1911, with Introduction. Tables I-XX, pp. i-xvi, 1-432. Vol. IV. Agriculture, with Introduction. Tables 1-90, I-XXXV, pp. i-xcv, 1-428. Diagrams 5 pp. Vol. V. Forest, Fishery, Fur and Mineral Production, with Introduction. Tables 1-51, I-XXVI; pp. i-l, 1-171. Vol. VI. Occupations of the People, with Introduction. Tables 1-25, I-VI, pp. i-xxxi, 1-469.

Bulletins of the Fifth Census of Canada, 1911: Manufactures of Canada—Dairy Industries—Agriculture, Prince Edward Island—Agriculture, Nova Scotia—Agriculture, New Brunswick—Agriculture, Quebec—Agriculture, Ontario—Agriculture, Manitoba—Agriculture, Saskatchewan—Agriculture, Alberta—Agriculture, British Columbia—Religions—Origins of the People—Birthplace of the People—Educational Status—Mineral Production—Infirmities—Ages—School Attendance.

Special Report of the Foreign-born Population. (Abstracted from the Records of the Fifth Census of Canada, June, 1911, 23 tables, 62 pp., 1915.)

Report of the Census of Population and Agriculture of the Prairie Provinces, 1916. Tables 1-54; I-XXVI, pp. i-lxiv, 1-356.

Vital Statistics.—Annual Report on Vital Statistics of Canada by provinces and municipalities. Monthly Report of Births, Marriages and Deaths, by provinces. Report of Conference on Vital Statistics, held June 19-20, 1918, pp. 1-48.

PRODUCTION—

I. General Summary of Production—

Including (1) Primary Production (Agriculture, Fishing, Furs, Forestry and Mining), and (2) Secondary Production, or General Manufactures.

II. Agriculture.—

(1) Monthly Bulletin of Agricultural Statistics. (Contains monthly reports on agricultural conditions, prices, weather, etc.—preliminary, provisional and final estimates of areas, yields, quality and values of field crops—numbers and values of farm live stock, poultry, etc.—fruit statistics—stocks of grain—annual summary of agricultural production—international agricultural statistics.) (2) Advance Summaries of Agricultural Statistics (monthly).

III. Furs.—

(1) Annual Report on Fur Farms. (2) Annual Report on the Production of Raw Furs.

IV. Fisheries.—

(1) Annual Report of Fisheries Statistics. (2) Advance Summary of Fish caught, marketed and prepared.

V. Forestry.—

(1) Annual summary of the value, etc., of forest production. (Covers operations in the woods for sawmills, shingle mills, pulp and paper mills, etc., production of mining timber; production of poles and cross ties, and farm production (decennial) of firewood, posts, etc.)

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VI. Mineral Production: (Mining and Metallurgy).—

- (1) General Reports: (a) Annual Report on the Mineral Production of Canada; (b) Preliminary Reports (semi-annual) on the Mineral Production of Canada. (2) Coal: (a) Annual Report on Coal Statistics for Canada; (b) Monthly Report on Coal Statistics for Canada. (3) Annual Bulletins on the following subjects: (a) Gold Production; (b) Silver Production; (c) Copper Production; (d) Nickel Production; (e) Lead Production; (f) Zinc Production; (g) Copper-Gold-Silver Industry; (h) Auriferous Quartz Mining Industry; (i) Placer and Hydraulic Gold Mining Industry; (j) Nickel-Copper Industry; (k) Silver-Cobalt-Nickel Industry; (l) Silver-Lead-Zinc Industry; (m) Miscellaneous Non-Ferrous Metals, including Antimony, Molybdenite and Tungsten; (n) Asbestos Industry; (o) Feldspar Industry; (p) Graphite Industry; (q) Mica and Phosphate Mining Industries; (r) The Salt Industry; (s) Miscellaneous Non-Metallic Minerals, including Actinolite, Barytes, Chromite, Corundum, Fluorspar, Magnesite, Magnesium, Sulphate, Manganese, Mineral Pigments, Mineral Waters, Natro-alunite, Peat, Pyrites, Quartz, Sodium, Sulphate and Talc; (t) Stone Quarrying Industry; (u) Sand and Gravel Industry; (v) Portland Cement Industry; (w) Miscellaneous Clay Products, including clay sewer pipe, Brick and Tile, Stoneware and Pottery, Fire Brick and Fire Clay, Kaolin and other Clays.

VII. Manufactures.—

- (1) General Summary, by Provinces and leading cities—(industrial groups classified by component materials, purpose, etc.—comparative statistics).
- (2) Manufacture of Vegetable Products—General report. Special Bulletins as follows: (a) Coffee and Spices; (b) Cocoa and Chocolate; (c) Fruit and Vegetable Preparation, including canning, evaporating and preserving; (d) Pickles, Sauces, Vinegar and Cider; (e) Flour and Cereal Mills; (f) Bread and other bakery products; (g) Biscuits and Confectionery; (h) Macaroni and Vermicelli; (i) Liquors, distilled; (j) Liquors, Malt; (k) Liquors, Vinous; (l) Rubber Goods and Rubber Boots and Shoes; (m) Starch and Glucose; (n) Sugar Refineries; (o) Tobacco Products; (p) Linseed Oil and Oil Cake.
- (3) Animal Products and their manufactures—General report. Special Bulletins as follows: (a) Dairy Products; (b) Slaughtering and Meatpacking; (c) Fish and Fish Products; (d) Leather Tanneries; (e) Harness and Saddlery; (f) Leather Boots and Shoes; (g) Leather Goods; (h) Leather Gloves and Mitts.
- (4) Textile and Allied Industries—General report. Special Bulletins as follows: (a) Cotton Textiles (Cloth, yarn, thread and waste); (b) Woollen Textiles (Cloth, yarn, blankets, felt and waste); (c) Silk Mills; (d) Clothing (Men's and women's factory and custom); (e) Hats, Caps and Furs; (f) Hosiery and Knit Goods; (g) Neckwear (Men's and women's) and Fancy Goods; (h) Oiled Clothing and Water-proofs; (i) Corsets; (j) Carpets, Rugs and Mats; (k) Cordage, Rope and Twine.
- (5) Manufactures of Wood and Paper Products—General report. Special Bulletin as follows: (a) Lumber, Lath and Shingle Industry (containing a statistical survey of Operations in the Woods contingent to this industry); (b) Pulp and Paper; (c) Cooperage; (d) Planing Mills, Sash and Door Factories; (e) Printing, Book-binding, Publishing, Lithographing and Engraving, Stereotyping and Electrotyping, Maps and Blue Prints; (f) Furniture; (g) Carriages, Wagons, and Sleighs, and Materials thereof; (h) Canoes, Rowboats and Launches; (i) Coffins and Caskets; (j) Containers—Boxes and bags (paper); boxes and packing cases (wood); baskets and crates; woodenware.
- (6) Iron and Its Products—General Report. Special Bulletins as follows: (a) Blast Furnaces and Steel Mills (annual); (b) Foundries and Machine Shops; (c) Iron and steel fabrication; (d) Machinery; (e) Boilers and Engines; (f) Agricultural Implements; (g) Motors and Cycles; (h) Railway Equipment; (i) Heating and Ventilating appliances; (j) Wire and wire goods; (k) Sheet Metal Products.
(N.B.—A Monthly Report on the Production of Iron and Steel is issued)
- (7) Manufactures of Non-Ferrous Metals—General report. Special Bulletins as follows: (a) Aluminium Products; (b) Brass and Copper Products; (c) Lead, Tin and Zinc Products; (d) Manufactures of precious metals; (e) Electrical apparatus.
- (8) Manufactures of Non-Metallic Minerals—General report. Special Bulletins as follows: (a) Aerated Waters; (b) Asbestos and Allied Products; (c) Coke and Gas; (d) Glass and its Products; (e) Graphite Products; (f) Petroleum Products; (g) Stone Products; (h) Abrasives.
- (9) Chemical and Allied Products—General report. Special Bulletins as follows: (a) Coal Tar and its Products; (b) Explosives, Ammunition, Fireworks and Matches; (c) Fertilizers; (d) Medicinal and Pharmaceutical preparations; (e) Pigments, Paints and Varnishes; (f) Soap, Perfume, Cosmetics and Toilet preparations; (g) Inks, Dyes and Colour compounds; (h) Wood distillation and extracts.

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(10) Miscellaneous Manufactures. Special Bulletins as follows: (a) Brooms and Brushes; (b) Musical Instruments (including pianos and organs, and phonographs); (c) Musical Instrument Materials and Parts; (d) Buttons; (e) Trunks and Valises.

(11) Summary Reports on Groups of Industries, classified according to the use or purpose of their principal product as follows: (a) Food; (b) Clothing; (c) Drink and Tobacco; (d) Personal and Household Goods; (e) Books; (f) Equipment; (g) Materials for further manufacture.

VIII. Construction.—(a) The Building and general construction industry; (b) Railway Telephone and Telegraph—Construction, Maintenance of Way and Repairs; (c) Government and Municipal Construction; (d) The Bridgebuilding Industry; (e) The Shipbuilding Industry; (f) Building Permits—Monthly Record.

EXTERNAL TRADE (IMPORTS AND EXPORTS)—

Annual Report of the Trade of Canada; Monthly Report of the Trade of Canada; Monthly Summary of Trade Statistics.

INTERNAL TRADE—

Grain.—

Annual Report on the Grain Trade of Canada; Weekly Report on the Grain Movement; Monthly Report on Mill Grind.

Live Stock, etc.—

Annual Report on Live Stock and Animal Products; Monthly Report on Stocks in Cold Storage; Quarterly Report on Visible Supply of Hides and Skins.

Price Statistics.—

Producers Prices; Wholesale and Jobbers' Prices; Retail Prices; Municipal Market Prices; Prices of Securities; Prices of Services.

Other.—

Monthly Report of Visible Supply of Raw and Refined Sugar.

TRANSPORTATION, COMMUNICATIONS AND PUBLIC UTILITIES—

Railways and Tramways.—

Annual Report on Railway Statistics; Monthly Bulletin *re* Railway Revenues, Expenses, Incomes and Operating Statistics; Monthly Statement *re* Traffic of Railways.

Express.—

Annual Report on Express Statistics.

Telegraphs.—

Annual Report on Telegraph Statistics.

Telephones.—

Annual Report on Telephone Statistics.

Water Transportation.—

Report of Census of Canadian Registered Ships; Annual Report on Canal Statistics; Monthly Report on Canal Statistics; Annual Report on Navigation.

Electric Stations.—

Central Electric Stations in Canada.

FINANCE—

Annual Report on Provincial Finance; Annual Municipal Statistics of Cities of 10,000 population and over; Annual Municipal Statistics of Urban Municipalities of 3,000 to 10,000 population; Annual Municipal Statistics of Urban Municipalities of 1,000 to 3,000 population.

JUSTICE—

Annual Report on Criminal Statistics.

EDUCATION—

Annual Report on Education Statistics; Report of Conference on Education Statistics, held October 27-28, 1920; Historical Statistical Survey of Education in Canada; Library Statistics of Canada, 1920-21; Statistics of Business Colleges; Statistics of Private Elementary and Secondary Schools; Statistics of Universities and Colleges.

SESSIONAL PAPER No. 10

GENERAL—

Employment.—Monthly and Annual Reports, by Localities and Industries.

The Canada Year Book, 1920, with Map of Canada and Newfoundland, a Statistical Summary of the Progress of Canada, and maps and diagrams, pp. i-xviii, 1-768.

Contents: I. Reconstruction in Canada, by S. A. Cudmore, B.A., (Tor.), M.A. (Oxon.), F.S.S., F. R. Econ. Soc., Editor Canada Year Book, Dominion Bureau of Statistics, Ottawa. II. Chronological History of Canada. III. Physical Characteristics of Canada including Geographical Features; Economic Geology, 1919, by Wyatt Malcolm, Department of Mines, Ottawa. IV. Area and Population. V. Education. VI. Climate and Meteorology. VII. Production. VIII. Trade and Commerce. IX. Transportation and Communications. X. Labour, Wages and Prices. XI. Finance. XII. Administration. XIII. Legislation and Principal Events of the Year, 1920. XIV. Extracts from the Canada Gazette.

The Canada Year Book, 1921, with frontispiece "The Arms of Canada," map of Canada and Newfoundland, a Statistical Summary of the Progress of Canada since 1871, and maps and diagrams, pp. i-xxiii, 1-909.

Contents: I. The Constitution and Government of Canada, by S. A. Cudmore, B.A. (Tor.), M.A. (Oxon.), F.S.S., F. R. Econ. Soc., Editor Canada Year Book. II. Provincial and Local Government in Canada; Maritime Provinces, Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia, by various writers. III. Chronological History of Canada. IV. Physical Characteristics of Canada, including special articles on Geology and Economic Minerals, Geology in Relation to Agriculture in Canada, the Flora of Canada, the Faunas of Canada and Economic Geology of Canada, 1920-21. V. Area and Population. VI. Education. VII. Climate and Meteorology, including article on the Climate of Canada since Confederation. VIII. Production, including article on the Development of Agriculture in Canada. IX. Trade and Commerce. X. Transportation and Communications. XI. Labour, Wages and Prices. XII. Finance. XIII. Administration. XIV. Legislation and Principal Events of the Year, 1921. XV. Extracts from the Canada Gazette.

